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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,208	12/15/2003	Steve Pollack	NC 84,693	1817

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EXAMINER

CAMERON, ERMA C

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,208

Applicant(s)

POLLACK ET AL.

Examiner

Erma Cameron

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-32 is/are pending in the application.
- 4a) Of the above claim(s) 2-5, 8-13 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 15-30 and 32 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Response to Amendment

Election/Restrictions

1. Claims 2-5, 8-13 and 31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 5/27/2005. Claims 22 and 23 have been rejoined and examined.

2. Applicant's election with traverse of the invention of all three process claims being present in the reply filed on 5/27/2005 is acknowledged. The traversal is on the ground(s) that not all the groupings of process conditions are mutually exclusive with the species of claim 6. This is not found persuasive because the election of species request was for single or grouped process conditions, and the applicant has elected the species of all three process conditions being present, and not for various other pairings.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 6, 14-18, 22-23 and 27-30 and 32 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a process to make a conductive coating, does not reasonably provide enablement for any coating. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to coating the invention commensurate in scope with these claims.

The claimed process does not appear to apply to any but conductive coatings. The claimed invention relates to highly conducting and transparent films.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a) Claim 1: there should be an "and" after 120C.

Claim Objections

7. Claim 22 is objected to because of the following informalities: Claim 22 lacks a period. Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The rejection of Claims 1, 6 and 24-30 under 35 U.S.C. 102(b) as being clearly anticipated by de Leeuw et al, Synthetic Metals, 66, pp 263-273, 1994 is withdrawn because of the amendment filed 5/27/2005 and 6/22/2005.

10. Claims 1, 22, 24-27 and 29-30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Angelopoulos et al (6153725).

'725 teaches controlling the rate of polymerization of conducting polymer precursors such as substituted and unsubstituted polythiophenes by selecting the right combination of solvents (4:60-5:19). The substituted or unsubstituted polythiophenes would be inclusive of the

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claimed ethylene dioxythiophene of claims 25 and 26. The polymerization mixture contains an oxidizer such as FeCl₃ (7:58-62), one or more solvents (see claim 8; 7:7-58) that may include pyridine or DMF (tertiary amine, BP=153), either of which would act as the moderator, and other solvents that may have BP>120, such as phenol (BP=182) or benzyl alcohol (BP=206), both alcohols. Films are made by spin-coating (8:59-67).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The rejection of Claims 15-21 and 32 under 35 U.S.C. 103(a) as being unpatentable over de Leeuw et al is withdrawn because of the amendment filed 5/27/2005 and 6/22/2005.

13. Claims 6, 15-21 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Angelopoulos et al (6153725).

'725 is applied here for the reasons given above.

'725 does not teach that the spin casting is a 2000-6000 RPM, but it would have been obvious to one of ordinary skill in the art to have optimized the spin rate depending on how thick one wanted the film.

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'725 teaches that the combination of solvents may be 0.1-100% of the solution. Because '725 teaches that the solvent choices and amounts control the polymerization, it would have been obvious to one of ordinary skill in the art to have optimized the concentration and ratios of the pyridine or DMF, which act as moderators, other solvents with BP>120, oxidizer, and thiophene precursor.

'725 does not teach what the conductivity or transparency are. Because the composition and process conditions of claim 1 is met, the conductivity and transparency of the films of '725 are expected to be the same as that claimed by applicant.

13. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Angelopoulos et al (6153725) taken in view of de Leeuw et al, Synthetic Metals, 66, pp 263-273.

'725 is applied here for the reasons given above.

'725 teaches FeCl₃ as an oxidizing agent for conducting films, but fails to teach iron tosylate as the oxidizing agent.

de Leeuw teaches iron tosylate as the oxidizing agent for conducting films (p 264).

It would have been obvious to one of ordinary skill in the art to have substituted the iron tosylate for the FeCl₃ of '725 with the reasoned expectation of equivalent results.

14. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Angelopoulos et al (6153725) taken in view of Smith et al (5968416).

'725 is applied here for the reasons given above.

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'725 teaches several solvents with BP>120, but fails to teach any of the solvents of claim 23.

'416 teaches 2-butanol, hexanol or pentanol as solvents when forming transparent, conducting polymers (15:19-44).

It would have been obvious to one of ordinary skill in the art to have substituted these solvents of '416 for the solvents of '725 because of the teaching of '416 that these are conventional solvents for use in making conducting polymers.

Allowable Subject Matter

15. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**


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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erma Cameron whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ERMA CAMERON
PRIMARY EXAMINER
July 25, 2005

Erma Cameron
Primary Examiner
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